Code No.: DS514PE | R20 | H.T.No. | | | 8 | R | | | | | |

CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
III–B.TECH–I–Semester End Examinations (Regular) - January- 2024
INTELLIGENT DATABASE SYSTEMS
(CSD)

[Time: 3 Hours] **[Max. Marks: 70]**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 20 marks. Answer all questions in Part A.
Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks.

PART-A **(20 Marks)**

1. a) Compare and contrast between traditional databases and IDBs. [2M]
   b) Imagine, you are working on a time series dataset. Your manager has asked you to build a highly accurate model. You started to build two types of models which are given below. [2M]
   Model 1: Decision Tree model
   Model 2: Time series regression model
   At the end of evaluation of these two models, you found that model 2 is better than model 1. What could be the possible reason for your inference?
   c) What is the difference between objects and literals in ODMG? [2M]
   d) Compare and contrast between relational and OO databases. [2M]
   e) What are the applications of Datalog? [2M]
   f) Compare different types of SQL constraints. [2M]
   g) Analyze the syntax for designing the expressing assertions and queries. [2M]
   h) What are the external data sources for KB systems? [2M]
   i) Classify the various formal representation languages. [2M]
   j) Determine the various key aspects of multimedia databases. [2M]

PART-B **(50 Marks)**

2. Make Use of Below table to answer questions 1-4. [10M]
   1.Using correct terminology, identify and describe all the components in Table.
   2. What is the possible domain for field EMPJOBCODE?
   3. How many records are shown?
   4. How many attributes are shown?
   5. List the properties of a table.

EMPLOYEE

EMPID	EMPLNAME	EMPINIT	EMPFNAME	EMPJOBCODE
123455	Friedman	A.	Robert	12
123456	Olanski	D.	Delbert	18
123457	Fontein	G.	Juliette	15
123458	Cruazona	X.	Maria	18

OR

3. Discuss the three types of data models in an entity-relationship (ER) model. [10M]

4. Outline the working of hyper-semantic model. [10M]

OR

5. Explain how arbitrary database state transitions are implemented? [10M]

6. Discuss the applications of commercial deductive database systems. [10M]

OR

7. Explain how object database technologies are integrated? [10M]

8. Discuss the model extensions through metaclasses by TELOS. [10M]

OR

9. Summarize the tight coupling manifest in KBS. [10M]

10. Compare and contrast the structured, semi-structured and unstructured data. [10M]

OR

11. Analyze the Applications of mediators to heterogenous systems. [10M]

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